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大球蚧属一新种*

（同翅目：蚧科）

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榆球坚蚧 *Eulecanium ulmicola* 新种（图 1）

产卵前雌成虫体长 4.5(3.5—5.6)mm、宽 3.4(3—4.5)mm、高 3.2(2.2—4)mm；极个别虫体长 2mm 或超过 5.6mm。体半球形至卵形、高突；褐色，光滑发亮；背中央色深，并有 4 纵列淡色连续斑纹。全体被有稀疏蜡粉。老熟死体呈暗褐色；体侧基部靠近寄主部分强收缩。被寄生的个体更加高突并浑圆发亮，体较正常个体大。有些个体沿体背两侧各有一条不明显的纵向凹陷，此凹陷上又具有横向的轻微点状凹陷。

显微结构：缘刺一列，刺呈长锥状，粗壮且先端尖锐，刺长为刺基部宽度的 4 倍以上。两群气门刺间缘刺 15—22 根。气间刺每群 2—3 根，相互靠近，均同形同长度并且明显短于缘刺，但与后者几乎同粗度；刺先端通常不尖锐。触角 7 节、第三节最长；各节长度之和为体长的 $\frac{1}{18}$。足小，各节长度之比依次为：腿节:胫节 = 1.13—1.14:1；胫节:跗节 = 1.75:1。爪齿明显。气门盘不大，其直径为后足腿节长的 $\frac{2}{3}$。大瓶状腺在腹面集成亚缘带，带宽约 5 腺宽，在口器周围呈小群；小瓶状腺稀疏分布于腹面中区。多格腺(常 10 格)分布于中区，不密集，但在腹部呈横带，于触角附近(内侧)有 1 至若干个。每条气门路上有 5 格腺约 10 个，从气门盘处一直分布到体缘近气门刺处，形成一不规则列。亚缘毛列不明显(因亚缘毛极稀疏)；暗框孔带内侧毛列缺如；腹末多格腺分布区边界处则有体刺呈 3 小群，每群 2—3 根。触角间毛 2 对；阴前毛 3 对同长。背面：筛状孔及小瓶状腺很多，而前者尤以背中区为密集。背刺狭长且散布。肛板长为宽的 2.3 倍，外角钝并且浑圆，致使前、后缘连作弧形。肛板具背端毛 2 根、内缘毛 3 根，全部呈毛发状。肛环发达，有两列环孔及粗长环毛 8 根。肛周及肛裂体壁均硬化呈带状。

正模♀，山西省太谷县侯城乡，榆 (*Ulmus* sp.), 1989. IV. 24；副模 7♀♀，采集地及寄主和日期(除其中 1♀采于同年 9 月13日外)同正模；次模 20♀♀(非玻片干标本)，采集地及寄主同正模，1989. IX. 13。全部模式标本由作者采得，现保存在山西农业大学蚧虫研究室。

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* 本研究承山西农业大学植保系汤祊德教授指导和苏联科学院动物研究所 E. M. Danzig 院士帮助，谨表谢意！

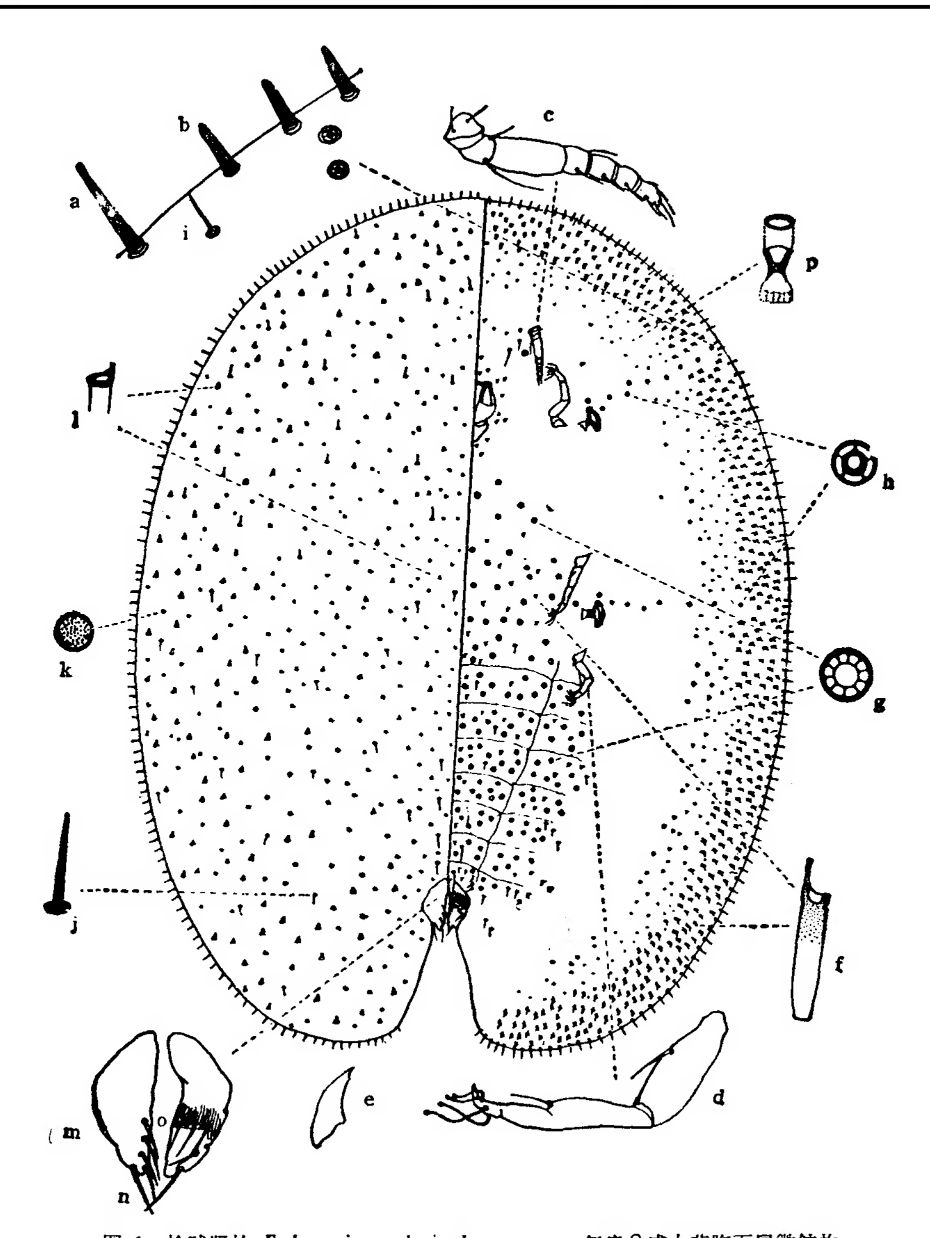


图 1　榆球坚蚧 *Eulecanium ulmicola* sp. nov. 年青♀成虫背腹面显微结构

a. 缘刺； b. 气门刺； c. 触角； d. 后足； e. 爪； f. 瓶状腺； g. 多格腺； h. 五格腺； i. 亚缘毛； j. 体刺； k. 筛状孔； l. 小瓶状腺； m. 肛板； n. 背项毛； o. 肛板内缘毛； p. 暗框孔。

本种产卵前期外观与榆皱大球蚧（*Eulecanium kostylevi* Borchs.）甚相近，而老熟死虫则又与睫毛大球蚧（*Eulecanium ciliatum* (Douglas)）近似，其区别如下：

E. kostylevi	*E. ulmicola*
1. 死体背项高度皱褶。	1. 死体背项光滑。
2. 气门刺比缘刺细得多且先端尖锐。	2. 气门刺与缘刺几同。粗度且先端不尖锐。

3. 后足腿节与气门盘直径等长。	3. 后足腿节长度超过气门盘直径的$\frac{1}{2}$。
4 肛环毛 6 根。	4. 肛环毛 8 根。
5. 背面筛状孔及小瓶状腺极少。	5. 背面筛状孔及小瓶状腺很多。
E. ciliatum	*E. ulmicola*
1. 年青雌成虫体较扁平;体宽为高的 1.4 倍以上。	1. 年青雌成虫体极高突；体宽一般为高的 1.1 倍。
2. 爪无齿。	2. 爪齿明显。
3. 肛板长等于宽的 2 倍,外角直角状且前、后缘绝不连作呈弧形。	3. 肛板长为宽的 2.3 倍,外角钝角形且浑圆,前、后缘因此而连作呈弧形。
4. 肛周及肛裂体壁均无硬化带。	4. 肛周及肛裂体壁均硬化呈带状。

A NEW SPECIES OF *EULECANIUM* COCKERELL (HOMOPTERA: COCCIDAE)*

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***Eulecanium ulmicola* sp. nov.** (fig. 1)

Prereproductive adult female usually 4.5(3.5—5.6) mm long, 3.4(3—4.5)mm wide and 3.2(2.2—4)mm high; a few individuals 2mm or more than 5.6mm long; hemispherical to ovoid, very convex, smooth and shiny, brown in color but darken on top with 4 continuously light marking bands, and covered with scattered wax powder. The body of grown dead female not wrinkly on back but strongly shrinks along the lateral margin attached to the host. The parasitized more rounded, shining and larger than the normal. Some individuals laterally with two longitudinal depressions which are indistinctive and with slightly dotted dents in transverse along the depressions.

Microstructure——A row of marginal spines stout, conical and long with acute points; the length of the spine more than 4 times than the basic width; 15—22 spines between ante- and post-spiracular depressions. Spiracular spines 2—3 in each group, nearly the same thick as but shorter and closer to each other than the marginal's, and also same shape and length, usually without tapering apexes. Antenna 7-segmented, of which the third one is the longest, and total length of all segments is one eighteenth of that of the body. The leg small, the proportions in length of

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segments: femur: tibia = 1.13—1.14:1; tibia:tarsus = 1.75:1. The claw with a denticle which is apparent. Spiracular peritreme not large, its diameter as long as two third of hind femur. Large tubular ducts form the submarginal band, about 5 ducts in width, and small groups around mouthparts. Small tubular ducts sparsely occur in median area. Multi(often 10)-loci pores not dense in median region but in transverse bands on abdomen and a few or one near each antenna. Quinquelocular pores, about 10, form per spiracular road which is an irregular row. A row of submarginal setae indistinctive; also absent is a row of setae internal to the band of obscurebo-reded pores; the body spines present 2—3 in three small groups external to the distribution boundary of multiloci pores on posterior abdomen. Interantennal setae 2 pairs. Prevulvar setae 3 pairs which are the same long. Dorsum: Simple disc pores and small tubular ducts numerous, but the former denser in central region. Body spines thin and long, and scatter over. Anal plate obtuse triangle, its length 2.3 times as long as its width, and external angle round; with 2 dorsal apical setae as well as 3 internal-margin setae, all hair-like. Anal ring well developed, with 2 rows of ring pores and 8 stout and long hairs. Scleroid band around both anal plates and anal clefts.

Holotype: Female; Taigu, Shanxi, P.R. China; on *Ulmus* sp ; April 24, 1989. Collected by the writer, preserved in the Research Section of Scale Insects, Shanxi Agricultural University.

Paratypes: 7 females; ditto except one female dated Sept. 13, 1989.

Metatypes: 20♀♀dry specimens; collected from the above place and host individuals, but dated Sept. 13, 1989.

This species resembles both *Eulecanium kostylevi* Borchs. in prereproductive stage and *Eulecanium cilia u.n* (Douglas) in grown dead stage, but their differences are as follow:

E. kostylevi	*E. ulmicola*
1. dead body very wrinkly on top	1. not wrinkly, but smooth
2. spiracular spines much thiner than the marginal's and tapering on apexes	2. almost the same thick as the marginal's and not tapering on apexes
3. femur as long as the diameter of spiracular peritreme	3. femur longer than the diameter of spiracular peritreme
4. anal ring with 6 setae	4. anal ring with 8 setae
5. disc pores and tubular ducts rare on dorsum	5. both numerous on dorsum

E. ciliatum	*E. ulmicola*
1. young adult female flattened; body width 1 4 times greater than height or more	1. highly convex; body width nearly equal to height
2. claw without any denticles	2. claw with a denticle
3. anal plate 2 times as long as wide, external triangle right form	3. anal plate 2.3 times as long as wide, external triangle obtuse and round
4. no scleroid band around anal plates and clefts	4. scleroid band around anal plates and clefts